Release A CDR RID Report

Date Last Modified 12/12/95
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RID ID CDR 74
Review SDPS/CSMS
Originator Ref IVVRID-DL-2
Priority 2

Section NA **Page** NA **Figure Table** NA

Category Name Cross Subsystem Interfaces **Actionee** ECS
Sub Category
Subject Requirements decisions impact on design

Description of Problem or Suggestion:

Program Impact There are detailed design areas which are "soft" because HAIS does not have the requirements decisions needed to complete the detailed design. HAIS response has been to focus on the mechanics of the software and hardware technology and to leave the functional design decisions incomplete. There are two results:
1) the CDR audience did not get answers to certain specific questions about the Release A functionality, were dissatisfied with the level of detail in design for those areas, and lacked confidence in the design even if the problems are not technically based, and
2) the design is not uniformly ready to code.
Description: Throughout the 305 document and the CDR presentations design decisions and details are deferred. There is no explicit definition of what is deferred and what the impact is on the design completeness and functionality delivered.
Examples of detailed design "soft" spots caused by not having requirements and design decisions are:
1) what are the functions of the DAAC help desk, and what are the functions of the ECS help desk? (CDR 8/17)
2) how will data types be added and what will the control mechanism be? (CDR 8/16)
3) how many hours should data sizing be based on (48, 72)? (CDR 8/16)
4) how does algorithm testing fit with the request for end-to-end system testing in release A (if this isn't in the current Release A plan, what is the impact?) (CDR 8/17)
5) what is the DAAC standard error handling? is there standard error handling across all DAACS? (CDR 8/15)
6) what is the policy for who gets what tools, and who are the different users and what are their capabilities? (CDR 8/15)
7) when do the data surveys and studies have to be done, and what is needed from the user community? (CDR 8/15)

Originator's Recommendation

Identify list of detailed design issues which depend on end-user requirement decisions, resolve, and incorporate in detailed design. The following steps are intended by IV&V to demonstrate one plausible approach to implementing the recommendation -- they are not intended as a program directive.
1) Create a list of undefined functional requirements which prevent the design detail from being completed. Identify those which are dependent on end-user decisions and information. Define system development impact (schedule, cost, risk, function loss).
2) Define ESDIS/ECS, DAAC, and end-user responsibility matrix for each category of undefined requirements. Define plan for getting decisions and information.
3) Revise system development impact based on dates in plan. Revise plan if necessary.

GSFC Response by: **GSFC Response Date**

HAIS Response by: Mac McDonald / Richard Meyer **HAIS Schedule** 9/20/95
HAIS R. E. Mac McDonald / **HAIS Response Date** 10/20/95

The process for identifying and resolving detailed design issues is dependent on specific circumstances. In general, open issues are being worked by the affected design teams directly with their NASA counterparts. The resolution of these issues is tied to the Release A three phase implementation plan which was presented at CDR (i.e., detailed issues need to be resolved before the phase in which the object classes depending on their resolution are implemented).

Critical external dependencies are identified in the ILN and are monitored by the Release A manager. The other issues are of a more detailed nature and are monitored by the respective subsystem / design element manager.

Specific areas of the design where issues were outstanding at CDR and their resolution processes are:

User Interfaces - Detailed user interfaces were not presented at CDR. Instead, we presented a process for developing them and obtaining user feedback. This process is currently being implemented and the process is similar to the development of the Operational Scenario and Operation Concept documents (DID 604 and DID 605). We are implementing mechanisms to review user interfaces (e.g., operations telecons and allowing access to custom/COTS user interfaces)

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Planning - One of the CSC of the Planning CSCI had outstanding issues. A successful delta design review for planning workbench was held in the meantime, and the issues are resolved (except as noted in the specific RIDs on that incremental CDR).

ICDs - There is continued coordination with external systems directly by the respective implementation group managers. Where the ICDs have TBDs, they also contain a work-off plan.

Data Model - Work on the data model will continue well into the Release B design phase. For Release A, it has become necessary to freeze the data model so that its implementation can proceed. That freeze date has been set to November 1. Changes after that time will not be addressed by Release A but will be folded into Release B..

Security - There is an action on NASA to respond to a RID for the development of a comprehensive security policy. Based on our current knowledge of the Release A data and their protection requirements, we believe that the mechanisms required to implement the system security needed for Release A are part of our design, and that the remainder is implementation work (e.g., creating the access profiles). Therefore, unless we are re-directed by NASA, ECS will proceed in accordance to what was presented at CDR.

Off site backup - See also RID #50. This is currently under negotiation with the Government, and the solution will be retrofitted into Release A.

COTS - All important Release A COTS decisions have been made, with the exception of the Web Server. That procurement is underway and a schedule for its completion has been established and is being worked to by ECS procurement and the affected technical teams.

Help Desk - A project RID was addressed Help Desk issues. This RID was responded to and approved. There is currently a working group in place (led by Hal Folts) to resolve these issues.

Some RIDs have identified differences in requirements interpretation. These differences are being worked through the normal RID process.

Issues which are at the level of policy and process are being worked by the ECS M&O organization with the Government and the DAACs (e.g., user services and help desk). The system is being designed to be as policy neutral as possible. The necessary tools to implement the Release A policies, such as control mechanisms for data types, management of faults, and available tools to users are provided.

Finally, there are still open issues which affect sizing, such as end-to-end testing, 72 vs. 48 hours. The current plan is to resolve these issues by Release B IDR. However, any requirements which would have a major impact on Release A sizing would have to be postponed for procurement and budget reasons.

Status **Closed** **Date Closed** **12/12/95** **Sponsor** **Folts/Blake**

****** **Attachment if any** ******
